

ABSTRACT

In the production of 2,2,3,3-tetrafluorooxetane by reaction of tetrafluoroethylene with a compound of formaldehyde generation source in anhydrous hydrogen fluoride, the reaction is carried out in the presence of polyfluoroalkylcarboxylic acid or polyfluoroalkyl ester thereof, represented by the following general formula $RfCOORf'$ (where Rf is a polyfluoroalkyl group having 1-5 carbon atoms, and Rf' is a hydrogen atom or a polyfluoroalkyl group having 1-5 carbon atoms), preferably CF_3COOH , $CF_3COOCH_2CF_2CF_3$, or $CF_3COOCH_2CF_3$, whereby a high reaction yield can be attained.